Economy Weakest Since December 1982; PMI Falls to 44.4%; Price Index Highest in 25 Months

SEPTEMBER REPORT

Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

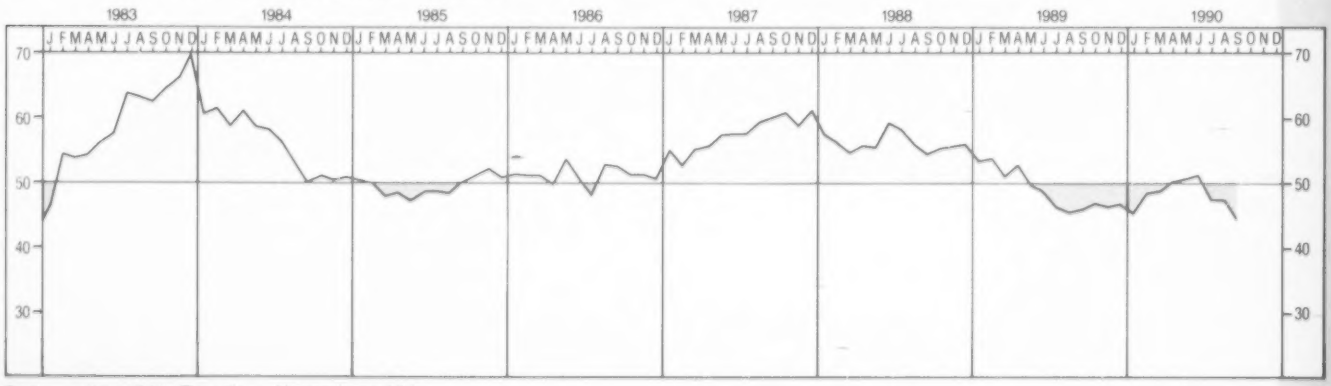
The manufacturing economy declined in September, for the third consecutive month to the lowest level since December 1982, which was the first complete month of the current economic expansion, say the nation's purchasing executives in their latest **Report on Business**. The Production Index declined for the second consecutive month to its lowest level since December 1982. The New Order Index declined for the third consecutive month and is the lowest since the trough of the previous recession, November 1982. New Export Orders continued to increase in September. However, the Imports Index declined for the fifth consecutive month and is the lowest since December 1989.

Supplier Deliveries were faster in September, reflecting the declining economy. Inventories decreased for the 22nd consecutive month at a greater rate than in August. The Employment Index declined for the 19th consecutive month at the greatest rate in five years. The Price Index inflated sharply in September to the highest level since August 1988, almost entirely as a result of the Middle East crisis.

In answer to a special question regarding capital spending plans for the next 6 to 12 months as a result of the Middle East crisis, 88% of respondents said their plans had not changed, 8% said they were revised downward, and 4% were revised upward. In another special question, of the 69% of the respondents who said they initiated requests for new or additional credit from financial institutions since June 1990, 96.5% said they encountered no additional difficulty and 3.5% reported tightened lending conditions.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The manufacturing economy ended the third quarter on a sour note. The sharp decline in New Orders in July and August has led to a decline in Production. The continued weakness in New Orders signals no relief in the near future. Coupled with sharply rising prices for petroleum-related products spawned by the Middle East crisis, the immediate outlook appears to be the worst of all combinations, a declining economy with rising inflation."

PURCHASING MANAGERS' INDEX



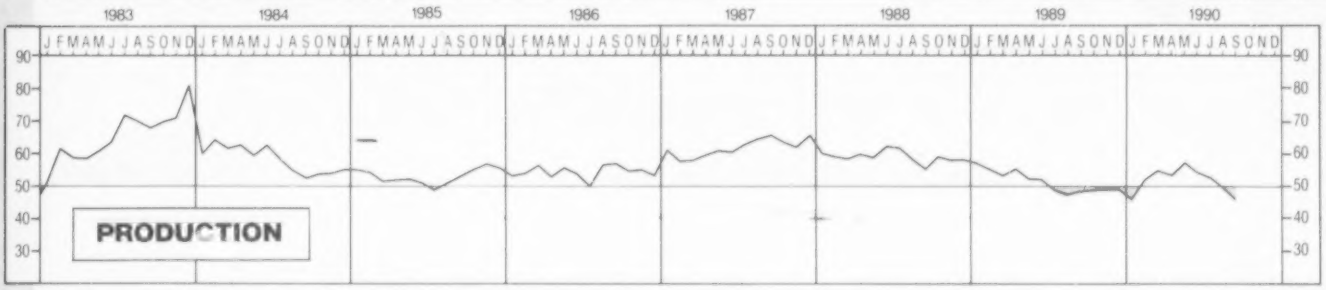
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

September '89	46.0	April '90	50.2
October '89	46.9	May '90	50.7
November '89	46.4	June '90	51.1
December '89	46.7	July '90	47.4
January '90	45.2	August '90	47.0
February '90	48.3	September '90	44.4
March '90	48.8		

The **Purchasing Managers' Index** (PMI) fell to 44.4%, down significantly from 47.0% in August and marked the third consecutive decline. The 44.4% is the lowest this leading indicator has registered since December 1982, at the outset of this long economic recovery. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "If the PMI remains unchanged at the September level for the remainder of the year, then past experience indicates this would be consistent with real GNP growth of about 1.0% for all of 1990. The PMI would have to fall below 44% before indicating a decline in real GNP, a point which has suddenly drawn very near."

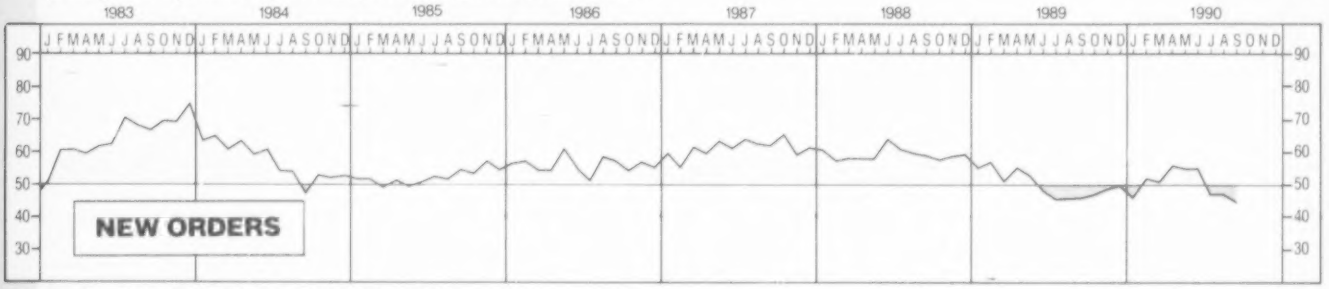
BUSINESS



Peak — July 1981; Trough — November 1982.

The sharp decline in New Orders in July and August resulted in the second consecutive decline in Production in eight months. The Production Index decreased to 45.1% from 48.5% in August, and is the lowest since December 1982, which was the first complete month of the current economic recovery. Continued underlying weakness in New Orders presages no significant improvement in Production in the near future.

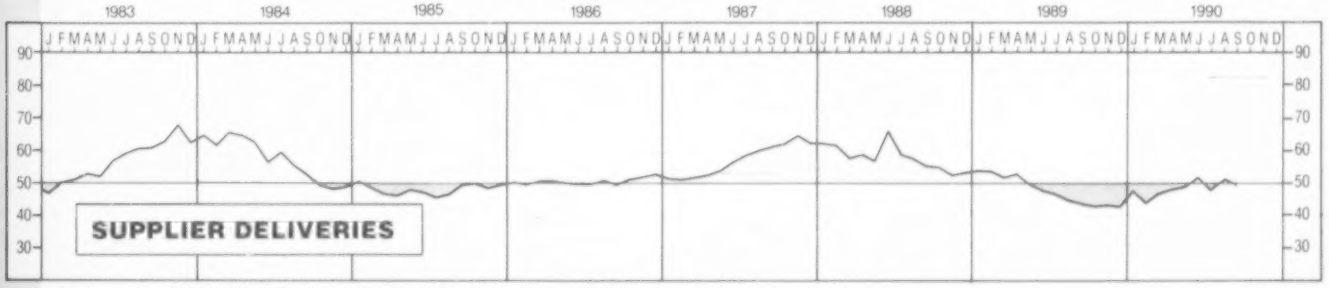
Production	%Better	%Same	%Worse	Net	Index
September 1990	23	48	29	− 6	45.1
August 1990	20	54	26	− 6	48.5
July 1990	19	58	23	− 4	52.1
June 1990	25	58	17	+ 8	53.9



Peak — July 1981; Trough — November 1982.

New Orders declined in September for the third consecutive month. The New Orders Index fell to 44.5%, down from 46.4% in August. The 44.5% is at the lowest level since November 1982 (41.5%), at the trough of the past recession, and suggests continued weakness in the economy as we enter the final quarter of 1990.

Production	%Slower	%Same	%Faster	Net	Index
September 1990	23	47	30	− 7	44.5
August 1990	21	49	30	− 9	46.4
July 1990	19	53	28	− 9	46.2
June 1990	28	49	23	+ 5	54.9



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were faster in September, resuming the trend exhibited for all but two months of the year. The Supplier Deliveries Index dropped to 49.4%, down from 51.1% in August. Apparently the Middle East situation has not resulted in any supply problems for purchasers as the number of commodities reported in short supply decreased to seven in September from 10 last month.

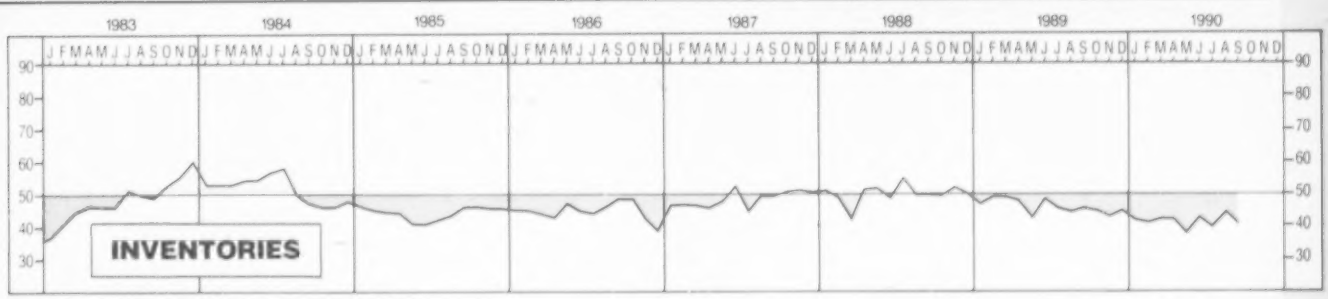
Production	%Slower	%Same	%Faster	Net	Index
September 1990	7	85	8	− 1	49.4
August 1990	7	87	6	+ 1	51.1
July 1990	6	83	11	− 5	47.3
June 1990	9	81	10	− 1	51.2

IN SHORT SUPPLY

Bearings — 26th consecutive month, a consequence of anti-dumping suits; **Castings; Caustic Soda/Soda Ash** — 40th consecutive month (used heavily in paper-making, petroleum refining and soap-making); **Diethylene Glycol** — Used in antifreeze solutions, and as a sealing, finishing and lubricating agent; **Freon** — 3rd consecutive month (used as a refrigerant and as an aerosol propellant); **Methyl Ethyl Ketone (MEK)** — Used heavily as a chemical solvent in surface coatings and making resins; **Styrene** — 3rd consecutive month (used chiefly in making synthetic rubber, plastic resins and plastic).

UP IN PRICE

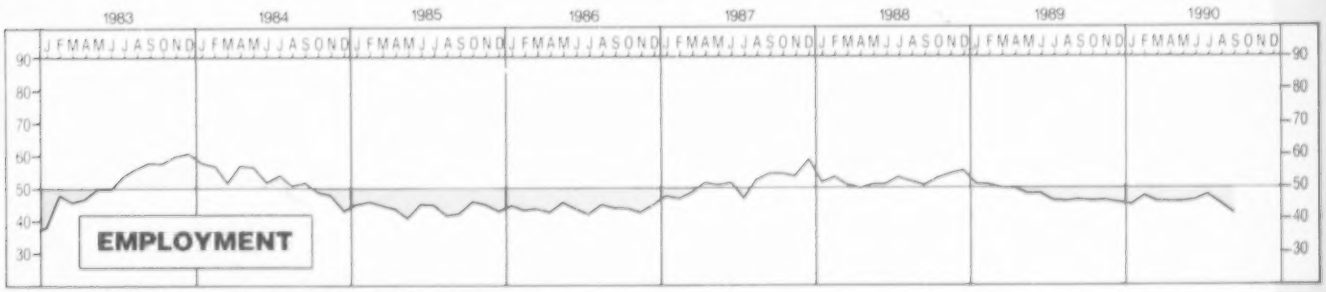
Aluminum — After mixed reports of both price increases and decreases in 4 of the previous 5 months; **Copper** — 6th consecutive month, after mixed reports of both price increases and decreases in 4 of the previous 5 months; **Nickel** — 2nd consecutive month, after being reported down in price in June; **Steel Scrap** — 2nd consecutive month; **Steel Pipe; Offset Printing Paper** — 4th consecutive month; **Antifreeze** — After being reported down in price in August; **Alcohol**; **Base Oils**; **Benzene** — Used heavily in making medicinal chemicals, dyes, varnishes, lacquers, and resins; **Caustic Soda/Soda Ash** — 46th consecutive month, primarily as a consequence of lower demand for co-produced chlorine by papermakers; **Diethylene Glycol** — Used in antifreeze solutions, and as a sealing, finishing, and lubricating agent; **Ethylene** — After being reported down in price in August for 4th consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Freon; Glycerine** — After being reported down in price in August (used in various ways, especially as a sweetener in confectioneries, cosmetics, soaps, and tobacco); **Glycols (Ethylene and Propylene)** — After Ethylene Glycol was reported down in price in August for 2nd consecutive month; **Lube Additives** — Chemical additives for making lubricating oil and grease; **Methyl Ethyl Ketone (MEK)**; **Phthalic Anhydride** — 2nd consecutive month (used heavily in making artificial resins, benzoic acid, and phthalates); **Solvents** — 2nd consecutive month; **Sulfur** — Used heavily in making sulfuric acid, matches, gunpowder, in bleaching wood pulp, and a variety of industrial uses; **Sulfuric Acid; Toluene** — Used heavily in making explosives, dyes, and



Peak — July 1981; Trough — November 1982.

Inventories declined again in September for the 22nd consecutive month and at a greater rate than in August. The Inventories Index fell to 40.8%, down from 44.1% last month. Some members indicated they have already or will soon be bringing in selected commodities earlier than required in order to delay the impact of announced price increases.

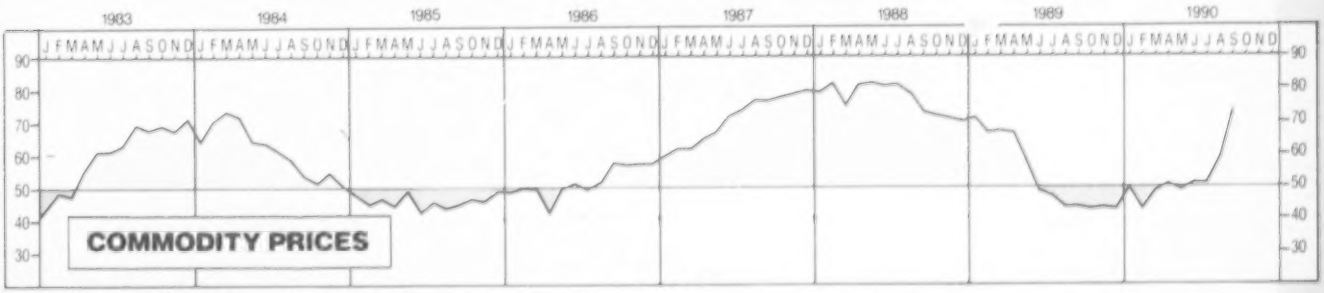
Production	%Higher	%Same	%Lower	Net	Index
September 1990	12	59	29	–17	40.8
August 1990	16	57	27	–11	44.1
July 1990	10	55	35	–25	39.3
June 1990	16	54	30	–14	42.9



Peak — July 1981; Trough — November 1982.

Employment declined in September for the 19th consecutive month at a greater rate than in August. The Employment Index fell to 41.5%, down from 44.1% last month. This is the lowest rate in over five years since August 1985 (41.1%), and suggests manufacturers are adjusting employment levels to mirror the decline in the economy.

Production	%Higher	%Same	%Lower	Net	Index
September 1990	8	65	27	–19	41.5
August 1990	9	68	23	–14	44.1
July 1990	13	70	17	– 4	47.2
June 1990	13	68	19	– 6	45.9



Peak — July 1981; Trough — November 1982.

Prices rose sharply for the second consecutive month, once again largely related to crude oil and petrochemical feed stocks and derivatives, such as plastic resins. The Price Index surged to 73.4% in September, up from 58.2% in August. The increase in the index of 15.2 points was the largest one-month increase in 15 years since August 1975 (15.8 points).

Production	%Higher	%Same	%Lower	Net	Index
September 1990	50	44	6	+44	73.4
August 1990	22	68	10	+12	58.2
July 1990	12	77	11	+ 1	50.9
June 1990	17	70	13	+ 4	50.9

benzoic acid, as a solvent in paint and as a gasoline additive; **Xylene** — Used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes; **Plastic Resins** — After being reported down in price in August for 8th consecutive month; **Polyethylene; Polypropylene** — Used heavily in making fabrics, yarns, and carpets; **Propylene** — 2nd consecutive month (used heavily in making polypropylene plastic and other chemicals); **Latex; Rubber; Styrene** — 2nd consecutive month; **Asphalt; Carbon Black; Diesel Fuel** — 2nd consecutive month; **Gasoline** — 2nd consecutive month; **Fuel Oil** — 2nd consecutive month after being reported down in price in July for 6th consecutive month; **Petrochemicals; Petroleum Products** — 2nd consecutive month; **Peanuts** — 2nd consecutive month; **Transportation Charges** — Surcharges added to existing rates for truck, rail, and air freight as a consequence of significant increases in transportation fuels.

DOWN IN PRICE

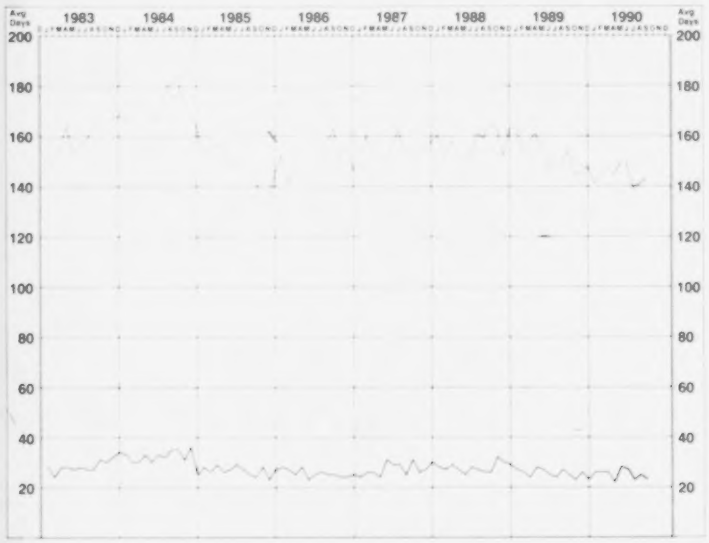
Zinc — 2nd consecutive month, after being reported up in price in July for 5th consecutive month; **Lumber** — 4th consecutive month; **Wood Pulp** — 2nd consecutive month; **Linerboard** — 7th consecutive month (used heavily in making corrugated shipping cartons); **Corrugated Shipping Containers** — 8th consecutive month; **Multiwall Bags** — Heavily used in packaging agricultural and industrial nonliquids; **Solid Bleached Sulfate (SBS) Paperboard** — Used to make folding cartons and backing for forms, checks, etc.; **Methanol** — 4th consecutive month; (used heavily as a solvent, a motor fuel additive and in synthesizing other chemicals); **Zinc Oxide** — After being reported up in price for 2nd consecutive month in July (used heavily as a pigmentation in paints and inks, in cosmetics, driers, quick-setting cement, and copier paper); **Carpet Staple and Filament** — In particular, stain resistant; **DRAMS** — 4th consecutive month; **Corn** — 2nd consecutive month (used heavily in making sweeteners, starches, and alcohol); **Corn Starch** — Used heavily in both food processing and papermaking; **Corn Sweeteners** — Used heavily in making sweeteners, starches, and alcohol; **Sugar** — 2nd consecutive month; **Orange Juice** — After being reported up in price in August.

BUYING POLICY

Overall buying policy did not change materially in September, with Capital Expenditures lengthening lead times slightly, and Production Materials and Maintenance, Repair, and Operating (MRO) Supplies shortening them somewhat.

The average lead times for Capital Expenditures increased to 143 days, up from 141 days in August, reflecting the continued relative strength in capital equipment.

The average lead time for Production Materials dropped to 46 days, down from 48 days in August and 49 days in July, mirroring the decrease in demand and faster Supplier Deliveries. The average lead time for Maintenance, Repair, and Operating (MRO) Supplies fell to 23 days, down from 25 days last month and the same as in July.

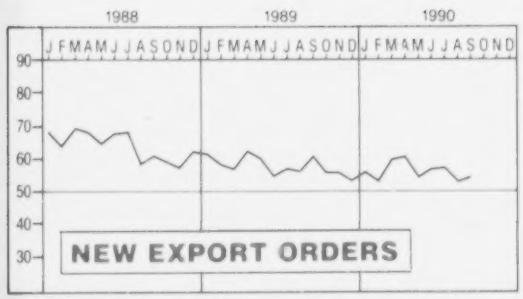


PERCENT REPORTING

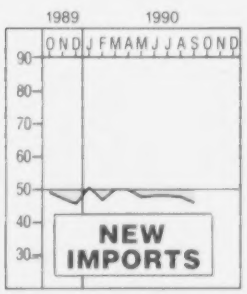
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
September	12	8	12	19	34	15	143
August	13	5	14	23	29	16	141
July	14	4	13	22	33	14	139
June	11	5	14	20	33	17	149

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
September	19	42	24	12	2	1	46
August	20	37	29	10	3	1	48
July	20	38	28	10	2	2	49
June	19	40	28	9	3	1	47

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
September	42	48	7	3	0	0	23
August	46	40	10	3	1	0	25
July	43	44	11	2	0	0	23
June	38	47	12	2	1	0	27



New Export Orders continued to be the brightest star in the economy. New Export Orders increased for the 33rd consecutive month. The New Export Order Index, not yet seasonally adjusted, rose to 54.0%, up from 53.0% in August. The percentage of members exporting rose to 76%, up slightly from 75% last month.



Imports declined for the fifth consecutive month. The Imports Index, not yet adjusted for seasonal variations, fell to 45.5% in September, down from 47.5% in August, and is at the lowest level in nine months (December 1989, also 45.5%). The percentage of members importing increased to 81%, up from 77% last month.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
September 1990	76	20	68	12	+ 8	54.0
August 1990	75	16	74	10	+ 6	53.0
July1990	74	24	66	10	+14	57.0
June 1990	77	20	73	7	+13	56.5

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
September 1990	81	5	81	14	– 9	45.5
August 1990	77	7	81	12	– 5	47.5
July 1990	76	9	78	13	– 4	48.0
June 1990	79	8	80	12	– 4	48.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.